

REMARKS

In response to the Office Action mailed December 23, 2005, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following remarks, have canceled claims and have added new claims. The claims as now presented are believed to be in allowable condition.

Claims 1-20 were pending in this Application. Claims 10-12 have been canceled. Claims 21-27 have been added. Accordingly, claims 1-9 and 13-27 are now pending in this Application. Claims 1, 3, 9, 13 and 17 are independent claims.

Allowed ClaimsClaims 7-8

Claims 7-8 were objected to as being dependent on a rejected base claim but were deemed allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Applicants expressly reserve the right to amend the claims as described above but will defer such an amendment until Applicant receives a reply to Applicant's request for reconsideration of certain rejected claims.

Claim 9

Claim 9 was amended to include language similar to that of claim 7 which was deemed allowable. Accordingly, Applicants respectfully submit that claim 9 is now in allowable condition for similar reasons.

Rejections under §102 and §103

Claim 9 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,208,517 (Prince et al.). Claims 1, 3, 13-15 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Prince in view of

Smithers and in further view of U.S. Patent No. 5,270,492 (Fukui). Claims 6 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Prince in view of Smithers, in further view of Fukui, and in further view of U.S. Patent No. 5,249,977 (Tanaka et al.). Claims 10 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Prince in view of Fukui. Claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Prince in view of Fukui, in further view of Tanaka. Claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over Prince in view of Smithers, in further view of U.S. Patent No. 5,346,118 (Degani et al.) in further view of Fukui.

Applicants respectfully traverse the rejections of claims 1, 3, 13 and 17 and request reconsideration. These claims are in allowable condition because they patentably distinguish over the cite references.

Prince discloses a heat sink 100 having a plurality of folds 102 (column 2 line 66 through column 3, line 2 and Figs. 2-3). Located on the outermost folds 103 are feet 104 (column 3, lines 2-3 and Fig. 3). Mounting receptacles 130, 140, 150 may be mounted to a printed circuit board 106 to provide an interface for securing the heat sink 100 in position over a device package 108 (column 4, lines 2-7 and Figs. 5A, 5B and 5C).

Smithers discloses a wire spring 20 with a pin fin heat sink 21 and an electronic device 22 (column 2, lines 31-33 and Fig. 5). These components are secured to a printed circuit board 18 by an anchor 10 (column 2, lines 33-36).

Fukui discloses an electronic device having leading end portions with respective lead terminals 2 (column 3, lines 1-30 and Fig. 1). Fukui was cited as teaching surface mount contacts (e.g., see page 7 of the Office Action).

Tanaka was cited as teaching a non-conductive body portion (e.g., see page 8 of the Office Action).

Degani was cited as teaching a surface mount technology process (e.g., see page 10 of the Office Action).

Claims 1-2

Claim 1 is directed to a circuit board module having, among other things, (i) a heat sink, (ii) a first clip holder and a second clip holder, each clip holder being mounted to respective surface mount pads of the circuit board using a surface mount technology soldering process, and (iii) a clip having a first portion configured to fasten to the first clip holder, a second portion configured to fasten to the second clip holder, and a third portion coupled to the first and second portions. The third portion is configured to position the heat sink adjacent the circuit board component when the first and second portions are respectively fastened to the first and second clip holders.

The cited references do not teach or suggest, either alone or in combination, a circuit board module having a heat sink and a clip, as recited in claim 1. Along these lines, the Office Action states that Prince fails to teach a separate heat sink component (see page 3, last line of the Office Action).

Applicants agree.

However, the Office Action then contends that it would be obvious to modify Prince with that of Smithers to have a separate heat sink component retained to the component by a clip. In particular, Smithers discloses a wire spring 20 with a pin fin heat sink 21 and an electronic device 22 (e.g., see column 2, lines 31-33 and Fig. 5), and the Office Actions contends that separation of an integral part into components has been held to be obvious to one of ordinary skill in the art (see top of page 4 of the Office Action). Applicants respectfully disagree. The Prince device is not a combination of a wire spring and a pin fin heat sink as disclosed in Smithers. Rather, in Prince, located on the outermost folds 103 are feet 104. Accordingly, **the Prince device does not separate into a wire spring and a heat sink as the Office Action contends.**

Moreover, it is unclear why one would want to modify the Prince device to work with a wire spring 20. That is, if the Prince device already adequately secures itself using feet 104, there is no need to place the Smithers wire spring 20 on the Prince device. Furthermore, it is unclear how one could make the

Prince device work with a wire spring in view of the Prince heat sink geometry (e.g., see any of the side views of Prince. None of the other references teach or suggest how one could make such a modification.

For the reasons above, claim 1 patentably distinguishes over the cited prior art. Accordingly, the rejection of claim 1 under 35 USC 103(a) should be withdrawn and claim 1 is in allowable condition.

Because claim 2 depends from and further limits claim 1, claim 2 is in allowable condition for at least the same reasons.

Claims 3-6

Claim 3 recites a heat sink assembly which is similar to the heat sink assembly recited within claim 1. Accordingly, claim 3 patentably distinguishes over the cited prior art for similar reasons to that of claim 1. Thus, the rejection of claim 3 under 35 USC 103(a) should be withdrawn and claim 3 is in allowable condition.

Because claims 4-6 depend from and further limit claim 3, claims 4-6 are in allowable condition for at least the same reasons.

Claims 13-16

Claim 13 recites a method which uses a heat sink assembly similar to the heat sink assembly recited within claim 1. Accordingly, claim 13 patentably distinguishes over the cited prior art for similar reasons to that of claim 1. Thus, the rejection of claim 13 under 35 USC 103(a) should be withdrawn and claim 13 is in allowable condition.

Because claims 14-16 depend from and further limit claim 13, claims 14-16 are in allowable condition for at least the same reasons.

Claims 17-20

Claim 17 recites a heat sink assembly which is similar to the heat sink assembly recited within claim 1. Accordingly, claim 17 patentably distinguishes

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over the cited prior art for similar reasons to that of claim 1. Thus, the rejection of claim 17 under 35 USC 103(a) should be withdrawn and claim 17 is in allowable condition.

Because claims 18-20 depend from and further limit claim 17, claims 18-20 are in allowable condition for at least the same reasons.

Newly Added Claims

Claims 21-26 have been added and are believed to be in allowable condition. Claims 21-22 depend from claim 1. Claim 23 depends from claim 9. Claims 24-25 depend from claim 13. Claims 26-27 depend from claim 17. Support for claims 21-26 is provided within the Application, for example, in original claims 3-8. No new matter has been added.

Conclusion

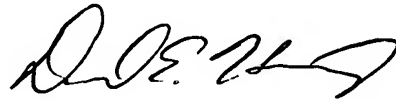
In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after this Amendment, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this Amendment, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3661.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,



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